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CHOI, PETER Y

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DANIEL K. SCHIFFER and
STEVEN R. STOPPER

Appeal 2008-2174
Application 10/036,106
Technology Center 1700

Decided: July 18, 2008

Before THOMAS A. WALTZ, KAREN M. HASTINGS, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 21-26, 31, 35, 37-54,, and 56-58, the only claims pending in the above-identified application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

The invention relates to a breathable outer cover laminate that may be used for various personal care absorbent articles, such as diapers (Spec., para. bridging pp. 4-5).

Claims 21 and 53 on appeal are illustrative:

21. A breathable outer cover laminate, comprising:
- a breathable, stretch-thinned barrier film having one or more layers;
 - one of the layers including a mixture of filler particles and a biodegradable thermoplastic polymer, having voids formed around the filler particles to facilitate passage of water vapor through the film, and constituting 50-100 % of a thickness of the film;
 - each of the layers including a biodegradable thermoplastic polymer; and
 - a fibrous nonwoven web continuously laminated face-to-face with the film and including a biodegradable thermoplastic polymer;
 - wherein the biodegradable thermoplastic polymers are selected from the group consisting of polylactic acid polymers; polyester terpolymers of butanediol, adipic or succinic acid, and terephthalic acid; polycaprolactone polymers; and combinations thereof.

53. A breathable outer cover laminate, comprising:
- a breathable, stretch-thinned barrier film having one to three layers including a primary breathable layer;
 - the primary breathable layer including a mixture of filler particles and a biodegradable thermoplastic polymer, and having voids formed around the filler particles to facilitate passage of water vapor;
 - each of the layers including a biodegradable thermoplastic polymer; and

a fibrous nonwoven web continuously laminated face-to-face with the film and including a biodegradable thermoplastic polymer.

The following prior art is relied upon by the Examiner in rejecting the claims on appeal:

Moss	4,698,372	Oct. 6, 1987
Borgher, Sr.	5,139,687	Aug. 18, 1992
Gallagher	5,171,308	Dec. 15, 1992
McCormack	5,955,187	Sep. 21, 1999
Trinh	5,968,404	Oct. 19, 1999
Chandler	6,028,160	Feb. 22, 2000

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

- (a) claims 21-26, 31, 35, 38-40, 48, 49, 53, 54, and 56-58 over Gallagher in view of Moss,
- (b) claims 41, 44-47 and 50-52 over Gallagher in view of Moss, and further in view of McCormack,
- (c) claims 42 and 43 over Gallagher in view of Moss, and further in view of Borgher or Trinh,
- (d) claim 37 over Gallagher in view of Moss, and further in view of Chandler.

ISSUE

Have Appellants shown reversible error in the Examiner's determination that a person having ordinary skill in the art would have found it obvious to arrive at the claimed invention in view of the applied prior art?

PRINCIPLES OF LAW

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such

that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007).

KSR reaffirms the analytical framework set out in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which mandates that an objective obviousness analysis includes: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; and (3) resolving the level of ordinary skill in the pertinent art. *KSR*, 127 S. Ct. at 1734. Secondary considerations such as commercial success, long-felt but unsolved needs, or failure of others “‘might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.’” *Id.* (quoting *Graham*, 383 U.S. at 17-18.).

KSR further instructs “that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 127 S. Ct. at 1740.

ANALYSIS

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejection for those reasons expressed in the Answer as well as the following reasons.

The § 103 Rejection of Claims 21-26, 31, 35, 38-40, 48, 49, 53, 54, and 56-58

Claims 21-26, 31, 35, 38-40, 48, 49 and 54

Appellants argue claims 21-26, 31, 35, 38-40, 48, 49 and 54 as a group (App. Br. 5). We therefore select the broadest independent claim 21 of this group to decide the issues on appeal.

We agree with the Examiner that Gallagher describes numerous laminate possibilities that encompass a laminate as set forth in claim 21, except patentee does not explicitly state that the barrier film layer is a breathable stretched-thin film layer. Specifically, Gallagher teaches various laminates, for example for use as a diaper, that may comprise numerous layers which each may include a biodegradable thermoplastic polymer (*see, e.g.,* Gallagher, col. 10, l. 52 to col. 12, l. 25). As one example, these layers may include a water permeable (i.e., breathable) topsheet of a fibrous nonwoven fabric with a leakage shield film (i.e., a barrier film) bonded thereto (*see, e.g.,* Ans. 3-4, 10-11; Gallagher, col. 11, l. 48 to col. 12, l. 8).

Gallagher describes that biodegradable polymers known in the prior art include polycaprolactone and polylactide (col. 2, ll. 34-40), and further teaches that polycaprolactone may be added to the polymer reactor in patentee's invention (col. 7, ll. 40-50).

Gallagher also teaches that "microporous films are taught by Moss...and similar techniques may be followed with products of the present invention" (col. 12, ll. 45-55). Moss describes a technique for making a breathable stretched-thinned film that includes particle fillers and polycaprolactone for use as, e.g., diaper liners, which Appellants do not dispute (Moss Abstract; col. 3, ll. 64-68; col. 9, ll. 24-30) .

Thus, to have used a breathable stretched-thin film layer as taught in Moss for the film layer of Gallagher, with a fibrous nonwoven web laminated face-to-face to same (e.g., in a diaper) as disclosed in Gallagher, and with each layer including a biodegradable polymer of polycaprolactone as claimed, as suggested in each of Gallagher and Moss, would have been prima facie obvious for the predictable result of obtaining an appropriate biodegradable diaper laminate structure. *KSR*, 127 S. Ct. at 1740. The use of polycaprolactone appears to be no more than the mere substitution of one biodegradable polymer for another known in the field (*id.*).

Appellants contend that Gallagher explicitly teaches away from using the claimed biodegradable polymers that include polycaprolactone (App. Br. 6; Reply Br. 2), and therefore Moss cannot be combined with Gallagher (App. Br. 9). Appellants further contend that the polymers taught in Gallagher do not anticipate or render obvious the specific polymers recited in claim 21. We disagree with Appellants.

First, we reject Appellants' argument that Gallagher's teaching (col. 2, ll. 34-40) of the disadvantages of using certain polymers (e.g., polycaprolactone, polylactide) is tantamount to the sort of "teaching away" that is evidence of nonobviousness. Certainly, skill in the art is presumed and we find that one of ordinary skill in the art would have found it obvious to weigh the advantages and disadvantages of including polycaprolactone, especially in light of all the circumstances detailed below. Just as it is obvious for one of ordinary skill in the art to eliminate a feature of the prior art along with its attendant advantage, it also is obvious to employ a feature of the prior art along with its known disadvantage. *See e.g., In re Thompson*, 545 F.2d 1290, 1294 (CCPA 1976); *In re Kuhle*, 526 F.2d 553, 555 (CCPA

1975).¹ Furthermore, as pointed out by the Examiner, Gallagher also explicitly describes adding polycaprolactone as a component of patentee's polymeric film (*see* Gallagher col. 7, ll. 39-50). Still further, as discussed above, Moss teaches use of polycaprolactone for breathable stretch-thinned materials used as diaper liners.

The breadth of claim 21 also supports our obviousness determination. It is axiomatic that claims are given their broadest reasonable interpretation in light of the specification as they would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Claim 21 notably does not require a "biodegradable film" (or laminate) as defined in the "Definition" section of Appellants' Specification (Spec., pp. 6-7). Rather, the claim recites that "each of the layers" and the "nonwoven web" laminated thereto "*including* a biodegradable thermoplastic polymer" (emphasis provided). We determine that the claim therefore encompasses as little as a trace amount of one of the recited biodegradable thermoplastic polymers in each layer and in the nonwoven web.

Further, Appellants' definition of "polymer" includes "copolymers, terpolymers, *etc.*, and blends and modifications thereof" (Spec., p. 6; emphasis provided). Thus, we also agree with the Examiner's analysis that

¹ *See also In re Boe*, 355 F.2d 961, 965 (CCPA 1966) ("All of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art. Thus, . . . this court affirmed rejections based on art which we concluded rendered the claimed invention obvious to those of ordinary skill in the art despite the fact that the art teachings relied upon in all three cases were phrased in terms of a non-preferred embodiment or as being unsatisfactory for the intended purpose.")

the claimed group of biodegradable polymers encompasses the biodegradable polymer of Gallagher having polycaprolactone added thereto (*see, e.g.*, Ans. 9; Gallagher, col. 7, ll. 49-50).

Finally, we also note that Appellants admit in the “Background of the Invention” section of their Specification that a laminate of breathable stretch-thinned film layer(s) with a nonwoven web on one or both sides is known in the prior art. Having acknowledged that certain claimed elements are taught in the prior art, Appellants cannot now defeat an obviousness rejection by asserting that the cited references fail to teach or suggest these elements. *See, e.g., In re Reuning*, No. 2007-1535, slip op. at 6 (Fed. Cir. April 25, 2008) (nonprecedential disposition); *and Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570 (Fed. Cir. 1988) (“A statement in a patent that something is in the prior art is binding on the applicant and patentee for determinations of anticipation and obviousness.”)²

Further, as the Examiner pointed out, one of ordinary skill in the art would have readily appreciated that all the layers must be biodegradable to fulfill the stated desire of Gallagher to be degradable (i.e., biodegradable). (*See, e.g.*, Ans. 11; Gallagher, Abstract, col., 1, ll. 59-68).

Recently, in *KSR Int’l Co. v. Teleflex Inc.*, the Supreme Court advised that the analysis in support of a conclusion of obviousness need not seek out express teachings that are directed to the subject matter of Appellants’ claim since the inferences and creative steps that a person of ordinary skill in the

² *See also In re Nomiya*, 509 F.2d 566, 571 n.5 (CCPA 1975) (It is a “basic proposition that a statement by an applicant, whether in the application or in other papers submitted during prosecution, that certain matter is ‘prior art’ to him, is an admission that that matter is prior art for all purposes . . .”).

art would have employed can be considered. *KSR*, 127 S. Ct. at 1740. Moreover, we find that including a polycaprolactone polymer with filler particles in a stretch-thinned barrier film layer, as well as including a polycaprolactone polymer in the non-woven fibrous layer that may be attached thereto, achieves the predictable result of the use of a known alternative biodegradable polymer as taught in *Gallagher* and in *Moss*. *KSR*, 127 S. Ct. at 1739, 1740. Appellants have not shown that there is more than a predictable result flowing from use of a polycaprolactone polymer in a laminate as taught in *Gallagher*.

Thus, we agree with the Examiner's conclusion of obviousness with respect to these claims.

Claims 53 and 56-58

Appellants separately argue these claims as a group (App. Br. 7). We select the broadest independent claim 53 of this group to decide the issues on appeal.

Independent claim 53 does not specify the type of biodegradable thermoplastic polymer in the laminate claimed, and thus is broader in this respect than independent claim 21. Because we have determined that the prior art applied by the Examiner rendered claim 21 obvious for the reasons set forth above, we likewise determine that claim 53 is unpatentable over the applied prior art.

Appellants contend, however, that *Gallagher* does not disclose a breathable outer cover laminate structure (App. Br. 7; Reply Br. 2). We do not agree for all the reasons discussed previously. We again emphasize that *Gallagher* explicitly permits the techniques of *Moss* to be used, and thus it logically follows that it would have been *prima facie* obvious to have made

the film barrier a breathable stretched-thin layer as that technique is taught in Moss. (*See also, e.g.,* Ans. 17). Appellants also contend that the nonwoven web in the outer cover of Gallagher is cotton, rayon or paper. However, we disagree that Gallagher is so limited. First, one does not even need to rely on that particular example of a laminate structure in Gallagher (*see, e.g.,* Ans., paragraph bridging pp. 10-11). But even if one does rely on that example, one of ordinary skill in the art would have readily appreciated that the nonwoven web of the backsheet (i.e., outer cover) may also include the compostable (i.e., the biodegradable) polymeric fibers (*see, e.g.,* Gallagher, col. 9, ll. 56-65). Appellants' claims do not preclude other materials in each layer. Thus, a mixture of fibers, including fibers of one of the claimed biodegradable polymers, is encompassed by the "fibrous nonwoven web" as claimed.

Thus, we agree with the Examiner's conclusion of obviousness with respect to these claims.

The § 103 Rejection of Claims 41, 44-47, and 50-52

The Examiner added McCormack to exemplify the known use of water-swellable filler particles as recited in dependent claim 41, and that these filler particles may be used in amounts of 10 to 70% by weight of the film layer which substantially overlaps the claimed filler amounts of dependent claims 44-47 and independent 50. McCormack also exemplifies that such a layer may be a monolayer or a multilayer film (col. 1, ll. 14-17) and may be used for personal care products such as diapers (col. 2, ll. 9-13). We agree with the Examiner's findings of fact based on McCormack and conclusion of obviousness (Ans. 5-6, 17).

Appellants' arguments with respect to claims 41 and 44-47 are all based on the same arguments made previously with respect to independent claim 21 (App. Br. 8). As set forth above, these arguments do not persuade us of any reversible error in the Examiner's conclusion of obviousness.

With respect to claims 50-52, Appellants make the additional argument that neither Gallagher or Moss disclose two of the film layers being adjacent and each including as mixture of the filler particles and the biodegradable thermoplastic polymer (App. Br. 11). Even assuming arguendo that this is true, we are unpersuaded of any reversible error in the Examiner's rejection of these claims.

One of ordinary skill in the art is also a person of ordinary creativity, not an automaton. *KSR*, 127 S. Ct. at 1742. McCormack exemplifies the obviousness of making a similar barrier film layer as Gallagher and/or Moss used for the same purpose (e.g., diaper layer(s)) either **a monolayer or a multilayer**. Therefore, we have no doubt that one of ordinary skill in the art would have readily appreciated that a multilayer film structure for the barrier film layer in the modified laminate of Gallagher/Moss would have been a known alternative for a monolayer film for the barrier film layer.

The § 103 Rejection of Dependent Claims 42 and 43

The Examiner added Borgher or Trinh to exemplify that cyclodextrin is a known biodegradable filler. We agree with the Examiner's findings of fact and conclusion of obviousness with respect to these claims (Ans. 6-7, 20³).

³ We note the Examiner uses language such as "the claims appear anticipated by the combined teachings" throughout the "Response to Argument" section of the Answer (*see, e.g.*, Ans. 12, 15, 17, 19, 20).

Appellants first repeat the same arguments as made with respect to claim 21 (App. Br. 11-12). Again, we find these arguments unpersuasive for the same reasons discussed previously.

Appellants also contend that the claims require the cyclodextrin filler particles to be within the barrier film layer (Reply Br. 4). Even assuming this to be true, we determine that one of ordinary skill in the art would have readily appreciated that other known biodegradable particles would have been useful as filler particles in making the barrier film layer of the outer cover laminate of Gallagher/Moss.

Thus, to modify Gallagher/Moss for the reasons as proposed by the Examiner to include the claimed cyclodextrin particles as filler particles would have been *prima facie* obvious.

The § 103 Rejection of Dependent Claim 37

The Examiner adds Chandler to exemplify that the claimed terpolymer is known in the prior art and is indeed commercially available. We note Appellants' Specification also admits that this terpolymer is commercially available (Spec. 10:1-4). We fully agree with the Examiner's finding of facts based on Chandler and conclusion of obviousness (Ans. 7, 22-23).

Appellants contend that the Examiner's position that the claimed terpolymer is functionally equivalent to that shown in Chandler contradicts the teachings of Gallagher. We disagree.

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. *See In re*

However, it is clear that all the rejections and analysis are based on obviousness under 35 U.S.C. § 103.

Young, 927 F.2d 588, 591 (Fed. Cir. 1991). We determine that one of ordinary skill in the art would have readily appreciated that other commercially available biodegradable polymers would have been useful in making the outer cover laminate of Gallagher/Moss.

Thus, to modify Gallagher/Moss for the reasons as proposed by the Examiner to include the claimed terpolymer would have been *prima facie* obvious.

CONCLUSION

We have considered Appellants' other arguments in the Appeal Brief and Reply Brief, but do not find any of them persuasive. Also, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the *prima facie* case of obviousness established by the Examiner.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of the applied references, for each grouping of claims as set out above, with Appellants' countervailing arguments for nonobviousness and conclude that the claimed invention encompassed by the appealed claims would have been obvious as a matter of law under 35 U.S.C. § 103(a).

DECISION

The Examiner's rejection of claims 21-26, 31, 35, 38-40, 48, 49, 53, 54, and 56-58 as unpatentable over the combined teachings of Gallagher and Moss is affirmed.

The Examiner's rejection of claims 41, 44-47 and 50-52 as unpatentable over the combined teachings of Gallagher, Moss, and McCormack is affirmed.

The Examiner's rejection of claims 42 and 43 as unpatentable over the combined teachings Gallagher, Moss, with either of Borgher or Trinh, is affirmed.

The Examiner's rejection of claim 37 as being unpatentable over the combined teachings of Gallagher, Moss, and Chandler is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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